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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,699	08/05/2003	Pablo Umana	1975.0010004/TJS	5489

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EXAMINER	
BURKHART, MICHAEL D	
ART UNIT	PAPER NUMBER
1633	
MAIL DATE	DELIVERY MODE
11/25/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/633,699	UMANA ET AL.	
	Examiner	Art Unit	
	Michael Burkhart	1633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *143-146,148-158 and 161-171* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *143-146, 148-158, 161-171* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Receipt and entry of the amendment dated 8/3/2009 is acknowledged. After entry of the amendment, claims 143-146, 148-158 and 161-171 are pending and under examination.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Priority

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 121 as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 09/294,584, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. See the 35 USC 112 1st ¶ rejection (New Matter) below. The instant claims are given a priority date of 8/5/2003, the filing date of the instant application.

Response to Arguments

Applicant's arguments filed 8/3/2009 have been fully considered but they are not persuasive. Applicants essentially assert that they are entitled to the priority date of the 09/294,584 application for reasons set forth in the response to the 35 USC 112-1st rejection below. Such arguments are considered to be answered below.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 143-158 and 161-171 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. **This rejection is maintained for reasons made of record in the Office Actions dated 10/31/2006, 11/15/2007, 2/3/2009 and for reasons set forth below. This is a New Matter rejection.**

Response to Arguments

Applicant's arguments filed 8/3/2009 have been fully considered but they are not persuasive. Applicants essentially assert that: 1) the Examiner is using an improper standard for the basis of this rejection; 2) the specification has inherent support for the claimed subject matter on pages 37- 38; 3) claim 168 has been amended.

Regarding 1), applicants still point to no broad disclosure of the claimed antibodies found in the specification, but rather, resort to attacking the reasoning of the Examiner. Throughout prosecution, the Examiner has repeatedly pointed out the lack of literal written description of the claimed subject matter, a fact applicants have yet to refute. Literal written support for an invention is one way to provide for the written description requirement, and thus is one proper standard for determining if applicants are in possession of an invention. The case law cited is thus not on point, as the Examiner has not questioned the "length" of the disclosure, but rather, the totality of the teachings of the specification regarding linking non-fucosylated antibodies with increased ADCC.

Because applicants do not have written, literal support for the claimed scope, applicants must rely upon inherent disclosure of the claimed subject matter.

Regarding 2), the increase in ADCC for the CE7 antibodies was correlated with an increase in bisected complex oligosaccharides (column 27, lines 9-13), not a decrease in fucosylated oligosaccharides. This is probably because the sample with the greatest proportion of non-fucosylated oligosaccharides, CE7-15t, did not show an increase in ADCC (see Figs. 9 and 12 of the '084 patent). The antibodies presented in the instant application that had increased ADCC did not have a "majority" of nonfucosylated oligosaccharides, nor were they completely devoid of fucosylated oligosaccharides (within the scope of the instant claims). There is no analysis or discussion of what the actual "proportion of nonfucosylated oligosaccharides" inherently found on the antibodies of the specification might be. Analysis of the oligosaccharide profiles of the CE7-60t and -30t antibodies reveals that a majority of the oligosaccharides are fucosylated. In Fig. 9C and D (CE7-60t and -30t, respectively), the peaks at m/z 1486, 1648,

1689, and 1851 all represent fucosylated oligosaccharides according to the disclosure (e.g. pages 37-39 and Figs 10-11), and, absent evidence to the contrary, represent a majority of the oligosaccharides: the m/z 1689 and 1851 are the two largest peaks in Fig. 9C and D. The m/z 1689 and 1851 peaks represent bisected complex oligosaccharides that are fucosylated, according to Fig. 11, the very peaks which led applicants to conclude that an increase in bisected complex oligosaccharides leads to an increase in ADCC (e.g. pages 36-39 of the specification). Therefore, the passage cited by applicants, and Figure 9, supports the analysis above, that is, many of the antibodies comprised significant amounts (e.g. a majority) of fucosylated oligosaccharides, not non-fucosylated glycans. That fucosylation may be blocked by the action of GnTIII appears irrelevant in light of this data and the conclusions drawn by applicants in the specification linking increased ADCC with an increase in bisected complex oligosaccharides. Applicants have yet to explain how then the instant application can provide support for antibodies having, for example, none or very little fucosylation (within the claimed scope) and still possess increased ADCC. It is not an inherent function of the disclosed antibodies for reasons set forth above, i.e. a negative correlation was found between increased ADCC and nonfucosylated oligosaccharides.

Finally, applicants seek to claim a vast scope of antibodies using a single example of a single antibody that inherently has a decreased portion of non-fucosylated glycans. Just as many of the glycans analyzed have increased or no change in fucosylation for reason of record. That Umana et al (WO 99/54342), used as a 102 reference against the claims, has the same specification as the instant specification is not disputed at present. However, the requirements for anticipation in a 35 USC 102 rejection and the requirements of 35 USC 112-1st ¶ are entirely

different. That is, a single species can anticipate a broadly claimed genus (as is the case here), but, conversely, a single species cannot provide written description for a broadly claimed genus. A review of Umana et al reveals no broad linkage of non-fucosylated glycans and increased ADCC, therefore, there is no reason to expand the results of a single species of antibody to the broadly claimed genus. The 35 USC 102 rejection over Umana et al relies only on the teachings of specific antibodies, i.e. chCE7 and C2B8, both to the same antigen, CD20.

Regarding 3), claim 168 remains rejected as being dependent upon claims 143 and 144.

Claim Rejections - 35 USC § 102

Claims 143-145, 148-155, 157, 158, 161-167 and 169-171 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al (Cancer Res., 1994, cited by applicants) as evidenced by Shinkawa et al (JBC, 2003, of record) and Raju et al (Glycobiol, 2000, cited by applicants). **This rejection is maintained for reasons made of record in the Office Action dated 2/3/2009, and for reasons set forth below.**

Regarding the claim amendments, these are considered to be product-by-process amendments, that is, they recite how the claimed antibodies are to be made. Product-by-process claims are not limited to the manipulations of the recited steps. See MPEP 2113. As such, the instant invention is still considered to be no different in scope than previously recited, i.e. the claimed antibodies still have the same structure, regardless of how they were produced.

Response to Arguments

Applicant's arguments filed 8/3/2009 have been fully considered but they are not persuasive. Applicants essentially assert that: 1) Nakamura et al do not teach a genetically glycoengineered antibody as instantly claimed.

Regarding 1), applicants fail to point any structural difference between this product-by-process limitation and the teachings of Nakamura et al. See the explanation above.

Claim 143-158, 161-167 and 169-171 are rejected under 35 U.S.C. 102(b) as being anticipated by Umana et al. (WO 99/54342, cited by applicants). **This rejection is maintained for reasons made of record in the Office Action dated 2/3/2009, and for reasons set forth below.**

Regarding the claim amendments, these are considered to be product-by-process amendments, that is, they recite how the claimed antibodies are to be made. Product-by-process claims are not limited to the manipulations of the recited steps. See MPEP 2113. As such, the instant invention is still considered to be no different in scope than previously recited, i.e. the claimed antibodies still have the same structure, regardless of how they were produced.

Response to Arguments

Applicant's arguments filed 8/3/2009 have been fully considered but they are not persuasive. Applicants essentially assert that: 1) Umana et al is not prior art because applicants are entitled to a priority date of 1998.

Such is not convincing for reason set forth above. Applicants are entitled to a priority date of 8/5/2003 for reasons set forth above.

Double Patenting

Claims 143-146, 149-155, 157, 158, 161, 162, , 164-167, and 169-171 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 246-269, 283 and 284 of copending Application No. 11/348,526. Although the conflicting claims are not identical, they are not patentably distinct from each other because the species of anti-EGFR antibody recited in the '526 claims anticipates, and thus renders obvious, the instant antibodies. EGFR is disclosed as inherently being expressed in several types of cancers (page 2 of the '526 specification).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented. **This rejection is maintained for reasons made of record in the Office Action dated 2/3/2009, and for reasons set forth below.**

Response to Arguments

Applicant's arguments filed 8/3/2009 have been fully considered but they are not persuasive. Applicants request the rejection be held in abeyance. Hence, the rejection stands.

Conclusion

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Burkhart whose telephone number is (571)272-2915. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Woitach can be reached on (571) 272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Burkhart/
Primary Examiner, Art Unit 1633